

# US EPA's Science Forum: Your Health, Your Environment, Your Future

In cooperation with: the Centers for Disease Control and Prevention (CDC), the Agency for Toxic Substances and Disease Registry (ATSDR), and the National Institute of Environmental Health Sciences (NIEHS)

The Forum will highlight the relationship between our environment and public health, and will include discussions on issues as diverse as the impacts of understanding the human genome and the impacts of the built environment. The Forum will also highlight the complementary roles of Federal public health agencies.

**May 16-18, 2006**  
 Ronald Reagan Building and International Trade Center  
 1300 Pennsylvania Avenue, NW  
 Washington, DC 20004  
<http://www.epa.gov/scienceforum>

## Tuesday, May 16, 2006

**\*Plenary Sessions will take place in the Amphitheater on the Concourse Level\***

9:30 – 10:00 AM <b>Opening Plenary Session</b>	<i>Welcome and Introductions</i> – <b>Dr. George Gray</b> , Assistant Administrator, U.S. Environmental Protection Agency (EPA) / Office of Research and Development (ORD)  <i>Perspectives on Environmental Public Health</i> – <b>Dr. James H. Johnson, Jr.</b> , Dean, College of Engineering, Architecture and Computer Sciences, Howard University		
10:00 – 10:15 AM	Break		
10:15 – 10:30 AM	<i>EPA Commitment to Environmental Public Health</i> – <b>Marcus C. Peacock</b> , Deputy Administrator of the U.S. Environmental Protection Agency		
10:30 – 11:30 AM <b>Opening Keynote Plenary Session</b>	<b>Opening Keynote Speaker</b> <i>Secrets of the Human Genome</i> – <b>Dr. J. Craig Venter</b> , Founder & President, J. Craig Venter Institute		
11:30 AM – 12:30 PM	Lunch on Your Own / Poster and Exhibit Viewing Opportunity		
12:30 – 2:30 PM <b>Disease Susceptibility Plenary Session</b>	<ul style="list-style-type: none"> <li>• <i>The Genome and Disease Susceptibility</i> – <b>Dr. Steven Kleeberger</b>, Chief of the Laboratory of Respiratory Biology, National Institute of Environmental Health Sciences (NIEHS)</li> <li>• <i>New Evidence in Life-Stage Susceptibility</i> – <b>Dr. Elaine Faustman</b>, Professor, University of Washington</li> <li>• <i>Health Disparities</i> – <b>Dr. William H. Sanders</b>, Acting Director, EPA / Office of Children's Health Protection and Environmental Education (OCHPEE)</li> </ul>		
2:30 – 3:00 PM	Break / Poster and Exhibit Viewing Opportunity		
3:00 – 5:00 PM <b>Disease Susceptibility Poster-Platform Sessions</b>	<u>Hemisphere B</u>  <i>Poster-Platform Session 1</i> <b>The Genome and Disease Susceptibility</b>	<u>Hemisphere A</u>  <i>Poster-Platform Session 2</i> <b>New Evidence in Life-Stage Susceptibility</b>	<u>Oceanic AB</u>  <i>Poster-Platform Session 3</i> <b>Health Disparities</b>
5:00 – 7:00 PM	<b>Poster Viewing Session and Poster Awards Reception (Atrium Hall)</b> Join us for an exciting networking opportunity and showcase of excellence in science! During this session you will have an opportunity to meet with your peers and explore the science they are presenting at this year's Forum while we recognize award-winning science posters.		

# Detailed Agenda for Tuesday, May 16<sup>th</sup>

## Forum Opening (9:30 – 11:30 AM)

*Welcome, Meeting Information and Introductions* – **Dr. George Gray**, Assistant Administrator, EPA Office of Research and Development

*Perspectives on Environmental Public Health* – **Dr. James Johnson**, Dean, College of Engineering, Architecture and Computer Sciences, Howard University

*EPA Commitment to Environmental Public Health* – **Marcus C. Peacock**, Deputy Administrator of the U.S. Environmental Protection Agency

### Opening Keynote Speaker

*“Secrets of the Human Genome”* – **Dr. J. Craig Venter**

This opening presentation will feature one of the leading scientists of the 21<sup>st</sup> century and his visionary thoughts on genomic research and the intersection between genomics and environmental and energy policy. The presentation will highlight current efforts in advancing the science of genomics and in applying genomic advances to some of the world's most vexing public health and environmental challenges.

## Plenary Session: Disease Susceptibility and the Environment (12:30 – 2:30 PM)

*Session Co-Chairs:* Dr. Julian Preston (EPA) and Dr. William Suk (NIEHS)

**Disease Susceptibility and the Environment** chronicles progress in understanding why some of us succumb to illness while others remain well. Session topics include:

1. **The Genome and Disease Susceptibility** explores: 1) the innovative work related to the genome and human disease susceptibility, and 2) the relevance of this new science to public health risk assessment, as well as recent advances in genomics/proteomics/metabonomics.

*Speaker:* **Dr. Steven Kleeberger**, Chief of the Laboratory of Respiratory Biology, NIEHS

2. **New Evidence in Life-Stage Susceptibility** explores: 1) the susceptibilities of children and how childhood environmental exposures may lead to health problems throughout life, and 2) discoveries that have brought to light both how resilient the aging population really is, and yet, why they sometimes have special vulnerabilities to environmental pollutants.

*Speaker:* **Dr. Elaine Faustman**, Professor, University of Washington

3. **Health Disparities** delves into the ways in which poverty and cultural differences can shape our lifestyles and attendant exposures to produce differential environmental health impacts. Research results and new challenges related to environmental equity issues will be explored.

*Speaker:* **Dr. William H. Sanders**, Acting Director, EPA/OCHPEE

## Poster-Platform Sessions: Disease Susceptibility and the Environment (3:00 – 5:00 PM)

*Poster Session Chairs:* Dr. Andrew Geller (EPA), Dr. Bruce Fowler (ATSDR), Dr. Julian Preston (EPA) and Dr. William Suk (NIEHS)

Three concurrent poster-platform sessions follow the *“Disease Susceptibility and the Environment”* plenary session. These poster-platform sessions correspond to and elaborate on the three subjects highlighted by plenary session talks: 1) *The Genome and Disease Susceptibility*; 2) *New Evidence in Life-Stage Susceptibility*; and 3) *Health Disparities*. Six to eight selected posters per poster-platform session will be presented by the primary investigators. Open group discussion follows. Additional related posters will be displayed in the Atrium Hall.

## Wednesday, May 17, 2006

\*Plenary Sessions will take place in the Amphitheater on the Concourse Level\*

8:30 – 10:30 AM <b>Global Challenges Plenary Session</b>	<ul style="list-style-type: none"> <li>• <i>Changing Environments</i> – <b>Dr. Rita Colwell</b>, Senior Advisor and Honorary Chairman of Canon U.S. Life Sciences</li> <li>• <i>Changing Diseases</i> – <b>Dr. Henry Falk</b>, Director, Coordinating Center for Environmental Health and Injury Prevention, Centers for Disease Control and Prevention (CDC)</li> <li>• <i>Changing Assessments</i> – <b>Dr. Peter Preuss</b>, Director, EPA / ORD / National Center for Environmental Assessment (NCEA)</li> <li>• <i>Changing Responses</i> – <b>Dr. Michael Shapiro</b>, Deputy Assistant Administrator, EPA / Office of Water (OW)</li> </ul>			
10:30 – 11:00 AM	Break / Poster and Exhibit Viewing Opportunity			
11:00 AM – 12:00 PM	<b>Former EPA Assistant Administrators for Research and Development (Amphitheater)</b> In recognition of EPA's 35 <sup>th</sup> Anniversary Celebration, Dr. George Gray and six former Assistant Administrators for ORD will come together to participate in a discussion about the current and future science challenges facing EPA.			
12:00 – 1:00 PM	Lunch on Your Own / Poster and Exhibit Viewing Opportunity			
1:00 – 3:00 PM <b>Global Challenges Poster-Platform Sessions</b>	<u>Continental C</u>  <i>Poster-Platform Session 1</i>  <b>Changing Environments</b>	<u>Oceanic AB</u>  <i>Poster-Platform Session 2</i>  <b>Changing Diseases</b>	<u>Hemisphere A</u>  <i>Poster-Platform Session 3</i>  <b>Changing Assessments</b>	<u>Hemisphere B</u>  <i>Poster-Platform Session 4</i>  <b>Changing Responses</b>
3:00 – 3:30 PM	Break / Poster and Exhibit Viewing Opportunity			
3:30 – 5:30 PM <b>Special Program Sessions</b>	<u>Atrium Hall / Amphitheater / Woodrow Wilson Plaza</u>  <b>Poster and Exhibit Viewing Opportunity</b>	<u>Oceanic AB</u>  <i>Special Program</i> <b>Federal Technology Transfer Act Training</b>	<u>Hemisphere A</u>  <i>Special Program</i> <b>Innovations in Risk Assessment Practice</b>	<u>Hemisphere B</u>  <i>Special Program</i> <b>Emerging Leaders Network</b>

### Plenary Session: Global Challenges (8:30 – 10:30 AM)

*Session Co-Chairs:* Dr. Anne Grambsch (EPA) and Dr. Chris Portier (NIEHS)

**Global Challenges** looks at how a changing environment is giving rise to potential new public health risks, and actions that could be taken to ameliorate these risks. Session topics include:

1. **Changing Environments** explores new public health challenges that are arising as global stressors change. Diseases that have emerged or re-emerged in recent years are the result, in part, of factors such as human behavior, global transportation patterns, extreme weather events and other changing environmental conditions. This session examines these environmental stressors and the implications for human disease. Biocomplexity, as well as changes in ecosystems and habitats that impact disease risks and quality of life, will also be discussed.

*Speaker:* **Dr. Rita Colwell**, Distinguished University Professor, University of Maryland at College Park and Johns Hopkins University Bloomberg School of Public Health, and Senior Advisor and Honorary Chairman of Canon U.S. Life Sciences

2. **Changing Diseases** explores threats to public health that are changing in response to a changing environment, e.g., changing human behavior, global transportation patterns, extreme weather events. This session examines the changing picture of environmental public health and delves into how new research and technologies can be used to track and guide efforts to address these public health threats.

*Speaker:* **Dr. Henry Falk**, Director, Coordinating Center for Environmental Health and Injury Prevention, CDC

3. **Changing Assessments** considers what we have learned about human health risks, how those risks are currently evaluated, and what changes need to be made to move risk assessment into the future. State-of-the-art approaches to health risk assessment and emerging challenges will be explored.

*Speaker: Dr. Peter Preuss*, Director, EPA/ORD/NCEA

4. **Changing Responses** explores how US federal health agencies have worked together to achieve remarkable success reducing US risks related to air and water pollution, which are listed among the 10 greatest hazards to public health by the World Health Organization. The session also examines how international agencies, US federal health agencies, and state and local health departments are working to meet new challenges to environmental public health. Cooperative interactions among governmental bodies and organizations to clean up and protect the environment and public health will be highlighted.

*Speaker: Dr. Michael Shapiro*, Deputy Assistant Administrator, EPA/OW

## **Poster-Platform Sessions: Global Challenges (1:00 – 3:00 PM)**

*Poster Session Chairs:* Dr. Mike Slimak (EPA), David Bussard (EPA), Dr. Andrew Geller (EPA), Dr. Bruce Fowler (ATSDR) and Dr. Chris Portier (NIEHS)

Four concurrent poster-platform sessions follow the “*Global Challenges*” plenary session. These poster-platform sessions correspond to and elaborate on the four subjects highlighted by plenary session talks: 1) *Changing Environment*; 2) *Changing Diseases*; 3) *Changing Assessments*; and 4) *Changing Responses*. Six to eight selected posters per poster-platform session will be presented by the primary investigators. Open group discussion follows. Additional related posters will be displayed in the Atrium Hall.

## **Special Program Sessions (3:30 – 5:30 PM)**

### **Federal Technology Transfer Act Training (CRADAs)**

Cooperative Research and Development Agreements (CRADAs) are the primary mechanism for establishing partnerships between federal laboratories and other research partners - including non-federal partners - to exchange personnel, equipment, services, and expertise for a specific research project. Under the authority of the Federal Technology Act of 1986, these partnerships are intended to provide a more efficient and effective means by which to apply federally funded technology to use in real-world applications.

### **Innovations in Risk Assessment Practice**

“*Innovations in Risk Assessment Practice*” will highlight novel approaches to address challenges in assessing human health risk. Specific examples will illustrate emerging approaches for estimating risks from low or acute exposures, for applying toxicogenomic data and life stage information, and for assessing human exposures. In addition, considerations for characterizing uncertainty and assessing cumulative risk will be explored.

*Session Chair: Dr. John Vandenberg*, EPA

### **Emerging Leaders Network**

The EPA Emerging Leaders Network (ELN) aims to provide networking and professional development opportunities for new, young (and young at heart) professionals at EPA. The Emerging Leaders Network is designed to offer a friendly, informal, yet structured environment for young Agency professionals to meet, network, learn about ongoing and emerging activities across the Agency and support each other in a collegial and collaborative atmosphere. The ELN includes fellows, interns, new graduates and new hires with a variety of scientific and technical backgrounds. The 2006 EPA Science Forum Emerging Leaders Network session will include a panel discussion on sustainability, stewardship, and collaborative programs.

## **Poster and Exhibit Viewing Opportunities**

Posters: Located in the Atrium Hall, Concourse Level

Indoor Exhibits: Located in the Amphitheater Foyer, Concourse Level

Outdoor Exhibits: Located on the Woodrow Wilson Plaza, Ground Level (**May 16-17 only**)

## Thursday, May 18, 2006

\*Plenary Sessions will take place in the Amphitheater on the Concourse Level\*

8:30 – 10:30 AM <b>The Built Environment Plenary Session</b>	<ul style="list-style-type: none"> <li>• EPA's Smart Growth Effort – <b>Tim Torma</b>, Deputy Director, EPA / Office of Business and Community Innovation (OBCI)</li> <li>• The Green House: New Directions in Sustainable Architecture and Design – <b>Martin Moeller</b>, Senior Vice President for Special Projects, The National Building Museum</li> <li>• Human Health and the Built Environment – <b>Dr. Howard Frumkin</b>, Director, CDC's National Center for Environmental Health (NCEH) and Agency for Toxic Substances and Disease Registry (ATSDR)</li> </ul>
10:30 – 11:00 AM	Break / Poster and Exhibit Viewing Opportunity
11:00 AM – 1:00 PM <b>The Built Environment Poster-Platform Session</b>	<p><u>Session: Amphitheater / Posters: Oceanic AB</u></p> <p><i>Poster-Platform Session</i> <b>The Built Environment</b></p>

### Plenary Session: The Built Environment (8:30 – 10:30 AM)

*Session Co-Chairs:* Dr. Hal Zenick (EPA) and Dr. Howard Frumkin (NCEH and ATSDR)

**The Built Environment** looks at demographic trends and how thoughtful planning of our built environment can eliminate or mitigate future environmental health problems. Certain organizations have been at the leading edge in planning our built environment. This session explores what solutions we have found, what we have learned and how we can better envision future problems and solutions.

1. **EPA's Smart Growth Effort** has been forward thinking in the incorporation of environmental health in planning land use, transportation and critical services planning, examining obstacles encountered by communities, and analyzing the benefits of these planning efforts. This session will focus on collaborative infrastructure planning efforts in developing healthy communities, including: recent research that challenges conventional wisdom about land use and the environment, and new approaches to urban and regional planning. New innovations to meet the evolving demands of the future will be highlighted.

*Speaker:* **Tim Torma**, Deputy Director, EPA/OBCI

2. **The Green House: New Directions in Sustainable Architecture and Design**, an exhibition at the National Building Museum, examines new developments in green technology and products; explores the building materials, consumer products, and energy systems that offer attractive and often affordable sources of the latest in home building technology and products; delves into developments in sustainability; and provides an informative overview of this dynamic design movement.

*Speaker:* **Martin Moeller**, Senior Vice President for Special Projects, National Building Museum

3. **Human Health and the Built Environment** explores trends in population demographics and the anticipated impacts on transportation, planning land use and critical services needs. With new science and new methods we can predict our future as never before and position ourselves to shape that future. The focus will be on trends and the demands placed on the environment and public health.

*Speaker:* **Dr. Howard Frumkin**, Director of NCEH and ATSDR

### Poster-Platform Session: The Built Environment (11:00 AM – 1:00 PM)

*Poster Session Chairs:* Dr. Laura Jackson (EPA) and Dr. Drue Barrett (CDC)

A poster-platform session will follow the *"Built Environment"* plenary session and will correspond to and elaborate on the three subjects highlighted by plenary session talks: 1) *EPA's Smart Growth Effort*; 2) *The Green House: New Directions in Sustainable Architecture and Design*; and 3) *Human Health and the Built Environment*. Six to eight selected posters will be presented by the primary investigators. Open group discussion follows. Additional related posters will be displayed in the Atrium Hall.